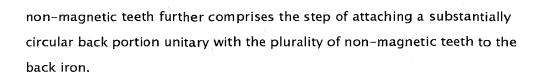
Claims

- [c1] A method for facilitating a fabrication of a high temperature superconducting electrical machine, said method comprising the steps of: fabricating a back iron; attaching a plurality of non-magnetic teeth to the back iron; and installing the back iron in the machine.
- [c2] A method according to Claim 1 wherein said step of fabricating a back iron further comprises the step of fabricating a back iron having a plurality of tooth slots, said step of attaching a plurality of non-magnetic teeth further comprises the step of attaching a back section of each tooth to a tooth slot.
- [c3] A method according to Claim I wherein said step of attaching a plurality of non-magnetic teeth further comprises the step of attaching a plurality of non-magnetic teeth to the back iron with at least one key.
- [c4] A method according to Claim 3 wherein said step of attaching a plurality of non-magnetic teeth further comprises the step of attaching a plurality of non-magnetic teeth to the back iron with an adhesive.
- [c5] A method according to Claim 1 wherein said step of attaching a plurality of non-magnetic teeth further comprises the step of attaching a plurality of non-magnetic teeth comprising at least one of a glass laminate, a carbon fiber, and a fiber polymer to the back iron with at least one key.
- [c6] A method according to Claim 1 wherein said step of attaching a plurality of non-magnetic teeth further comprises the step of attaching at least one non-magnetic tooth including at least one embedded conductor.
- [c7] A method for fabricating a stator with non-magnetic teeth, said method comprises the steps of:
 fabricating a back iron; and attaching a non-magnetic tooth back portion to the back iron.
- [c8]
 A method according to Claim 7 wherein said step of attaching a plurality of

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[c10]



- [c9] A method according to Claim 8 wherein said step of attaching a plurality of non-magnetic teeth further comprises the step of attaching a substantially circular back portion unitary with the plurality of non-magnetic teeth to the back iron with a key.
 - A method according to Claim 7 wherein said step of attaching a plurality of non-magnetic teeth further comprises the step of attaching a plurality of non-magnetic teeth comprising at least one of a glass laminate, a carbon fiber, and a fiber polymer to the back iron.
- [c11] A method according to Claim 7 wherein said step of attaching a non-magnetic tooth back portion further comprises the step of attaching a non-magnetic tooth back portion including at least one embedded conductor to the back iron.
- [c12] A stator comprising:

 a back iron; and

 a plurality of non-magnetic teeth unitary with a back portion, said back portion mounted on said back iron.
- [c13] A stator according to Claim 12 wherein said back portion is substantially circular.
- [c14] A stator according to Claim 13 further comprising at least one key extending from said back portion.
- [c15] A stator according to Claim 12 wherein said back portion is mounted on said back iron with a key.
- [c16] A stator according to Claim 12 wherein said non-magnetic teeth comprise at least one of a glass laminate, a carbon fiber, and a fiber polymer.

[c17]	A stator according to Claim 16 wherein at least one of said non-magnetic
	teeth comprises at least one embedded conductor.
[c18]	A dynamoelectric machine comprising:
	a housing;
	a stator comprising a bore therethrough mounted in said housing, said
	stator comprising a back iron and a plurality of non-magnetic teeth unitary
	with a back portion, said back portion mounted to said back iron;
	a plurality of armature windings mounted on said teeth; and
	a rotor rotatably mounted in said bore, said rotor comprising a plurality of
	field windings.
[c19]	A machine according to Claim 18 wherein said back section is substantially
	circular.
[c20]	A machine according to Claim 18 wherein said field windings are
,	superconducting field windings.
[621]	A machine according to Claim 20 further comprising:
[c21]	A machine according to Claim 20 further comprising: a rotor jacket surrounding said field windings; and
	a vacuum pump in flow communication with an interior of said rotor jacket.
	a vacually pump in now communication with an interior of said rotor jacket.
[c22]	A machine according to Claim 21 further comprising a cryogenic cooler
	coupled to said rotor shaft.
[c23]	A machine according to Claim 18 wherein said field windings configured for
	synchronous operation with said armature windings.
[c24]	A machine according to Claim 18 wherein said back portion keyed to said
	back iron.
[c25]	A machine according to Claim 24 wherein said back portion adhesively
	bonded to said back iron.
[c26]	
[CZO]	A machine according to Claim 18 wherein said non-magnetic teeth comprise
[620]	A machine according to Claim 18 wherein said non-magnetic teeth comprise at least one of a glass laminate, a fiber polymer, and a carbon fiber.

[c27] A machine according to Claim 18 wherein at least one of said non-magnetic teeth comprise at least one conductor.